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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SRINIVAS NOMULA

Appeal 2009-002887
Application 10/684,943
Technology Center 3700

Decided: September 8, 2009

Before LORA M. GREEN, RICHARD M. LEBOVITZ, and FRANCISCO C. PRATS, *Administrative Patent Judges.*

GREEN, *Administrative Patent Judge.*

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 1-7, 9-17, 19-27, 29, 30, 40, and 41. We have jurisdiction under 35 U.S.C. § 6(b).

STATEMENT OF THE CASE

Claims 1 and 21 are representative of the claims on appeal, and read as follows:

1. An easy-opening, retortable container comprising:

a base portion having a bottom and side defining an interior space and an opening thereto; and

a plastic membrane of sufficient size to cover the opening and having an outer peripheral area attached to the base portion by a radiation weakened bond, the radiation weakened bond being formed of an adhesive and having a predetermined tensile force strength; and

wherein the predetermined tensile force strength of the weakened bond allows easy-opening of the container by peeling the membrane from the base portion.

21. An easy-opening closure for hermetic sealing of an open end of a retortable container, the closure comprising:

a plastic end ring having an outside peripheral area adapted to be joined to the open end of the retortable container and an intermediate area extending radially inward from the outer peripheral area and defining an opening to allow access therethrough to the interior of the container; and

a plastic membrane of sufficient size to cover the opening and having an outer peripheral area overlapping and attached to the intermediate area of the end ring by a bond, the bond being formed of an adhesive disposed between the plastic end ring and the plastic membrane and having a predetermined shear force strength and configured to be radiation weakened to have a predetermined tensile force strength; and

wherein the predetermined shear force strength of the bond is sufficient to withstand forces created during retort processing of the container, and the predetermined tensile force strength of the bond allows easy-opening of the container by peeling the membrane from the end ring.

The Examiner relies on the following evidence:

Matuszak	US 5,069,355	Dec. 3, 1991
Feldmeier	US 5,180,599	Jan. 19, 1993
Nelson	US 5,752,614	May 19, 1998

Kang	US 6,132,861	Oct. 17, 2000
Reese	US 6,302,321 B1	Oct. 16, 2001

The following grounds of rejection are before us for review:

I) Claims 1-7, 9[1]-17, 20-27, 30, 40, and 41 stand rejected under 35 U.S.C. § 103(a) as being obvious over the combination of Matuszak and Feldmeier;

II) Claims 9, 20, and 29 stand rejected under 35 U.S.C. § 103(a) as being obvious over the combination of Matuszak and Feldmeier as further combined with Reese;

III) Claims 1-7, 10, and 40 stand rejected under 35 U.S.C. § 103(a) as being obvious over the combination of Nelson, Feldmeier and Matuszak;

IV) Claims 9 and 41 stand rejected under 35 U.S.C. § 103(a) as being obvious over the combination of Nelson, Feldmeier and Matuszak, as further combined with Reese;

V) Claims 11-17, 19, and 20 stand rejected under 35 U.S.C. § 103(a) as being obvious over the combination of Nelson, Feldmeier and Matuszak;

VI) Claims 21-27 stand rejected under 35 U.S.C. § 103(a) as being obvious over the combination of Nelson and Matuszak; and

VII) Claim 29 stand rejected under 35 U.S.C. § 103(a) as being obvious over the combination of Nelson and Matuszak, as further combined with Reese.

We affirm rejection IV.

We also affirm rejection I as to claims 1-7, 9, 11-17, 20-27, 40, and 41, but reverse as to claims 10, 20 and 30. Similarly, we affirm rejection II as to claims 9 and 29, but reverse as to claim 20; affirm rejection III as to claims 1-7 and 40, but reverse as to claim 10; and affirm rejection V as to claims 11-17 and 19, but reverse as to claim 20.

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[1] The Examiner included claim 8, but claim is canceled.

We reverse rejections VI and VII.

PRINCIPLES OF LAW

The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) the level of ordinary skill in the art; (3) the differences between the claimed invention and the prior art; and (4) secondary considerations of nonobviousness, if any. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966).

The Supreme Court has recently emphasized that "the [obviousness] analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Id.* at 416. Moreover, an "[e]xpress suggestion to substitute one equivalent for another need not be present to render such substitution obvious." *In re Fout*, 675 F.2d 297, 301 (CCPA 1982).

Moreover:

> *Where . . . the claimed and prior art products are identical or substantially identical,* or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed

> product. . . . Whether the rejection is based on "inherency" under 35 U.S.C. § 102, on "prima facie obviousness" under 35 U.S.C. § 103, jointly or alternatively, the burden of proof is the same, and its fairness is evidenced by the PTO's inability to manufacture products or to obtain and compare prior art products.

In re Best, 562 F.2d 1252, 1255 (CCPA 1977) (emphasis added.)

While the analysis under 35 U.S.C. § 103 allows flexibility in determining whether a claimed invention would have been obvious, *KSR*, 550 U.S. at 418, it still requires showing that "there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue." *Id.* "We must still be careful not to allow hindsight reconstruction of references to reach the claimed invention without any explanation as to how or why the references would be combined to produce the claimed invention." *Innogenetics, N.V. v. Abbott Labs.*, 512 F.3d 1363, 1374 n.3 (Fed. Cir. 2008).

ISSUES (Feldmeier)

The Examiner concludes that the rejected claims are obvious over Feldmeier as combined with other references, as Feldmeier teaches adhesive with a radiation weakened bond.

Appellant contends that Feldmeier does not teach adhesive with a radiation weakened bond. Appellant contends further that, even if Feldmeier may be said to disclose an adhesive with a radiation weakened bond, the Examiner has not established a prima facie case that the bond may be weakened by microwave radiation.

Thus, the issues on appeal are: 1) Has Appellant established that the Examiner erred in finding that Feldmeier teaches an adhesive with a radiation weakened bond? and 2) Has Appellant established that the Examiner failed to establish a prima facie case that even if Feldmeier discloses an adhesive with a radiation weakened bond, that the bond may be weakened by microwave radiation?

FINDINGS OF FACT

FF1 The Specification teaches that the "invention relates to an easy-opening closure for hermetic sealing of an open end of a retortable container and an easy-opening container that is hermetically sealed by such a closure." (Spec. 1.)

FF2 The Specification notes that "[r]etortable containers are those that can withstand a pasteurization or retort process comprising heat and pressure for preserving the food contents of the container," wherein "the container can be subjected to temperatures above 212°F, e.g., up to 280°F, under pressures of 15 to 30 psi." (*Id.*)

FF3 The Specification teaches further that "[e]asy-opening containers are those that can be opened without undue effort and without the use of a special tool such as a rotary can opener." (*Id.*)

FF4 The Specification discloses "an easy-opening container and a closure with a bond that is weakened with radiation so that the container sealed by the closure can be easily opened by a consumer," wherein the bond may be weakened after the retort process (*id.* at 2).

FF5 The Examiner rejects claims 1-7, 9-17, 20-27, 30, 40, and 41 under 35 U.S.C. § 103(a) as being obvious over the combination of Matuszak and Feldmeier (Ans. 3).

FF6 The Examiner finds that Matuszak teaches essentially all of the limitations of the rejected claims, including a weakened bond (*id.*). Specifically, as to the disputed limitation, the Examiner finds that Matuszak teaches the use of an adhesive bond that "has a predetermined tensile force strength that allows easy opening of the container by peeling the membrane from the base portion." (*Id.* (citing Matuszak, col. 4, ll. 27-32 and col. 5, ll. 38-48).)

FF7 The Examiner notes that "Matuszak discloses the lid is bonded to the container by opening the adhesive, but is silent regarding the adhesive bond being a radiation weakened bond." (Ans. 3.)

FF8 The Examiner cites Feldmeier for teaching that "it is known to provide a container and lid, the lid being bonded to the container opening by various methods including a radiation weakened adhesive bond." (*Id.* (citing Feldmeier, Abstract and col. 2, l. 15).)

FF9 The Examiner notes that "peelable bonds are well known in the container art," and that the corona charged bond of Feldmeier is a peelable bond, thus "[t]here is no structural difference between that which is claimed and that which is known in the art." (Ans. 10.)

FF10 Feldmeier teaches adhesive-based package seals, wherein the adhesive bond strength of the adhesive-based peelable package seals is decreased "to enable the adhesive to peel uniformly away from one package surface." (Feldmeier, col. 1, ll. 9-13.)

FF11 Specifically, Feldmeier teaches:

> Such a seal is accomplished by providing a sheet of polyacrylonitrile film, such as Barex, and surface treating either a portion or all of that film sheet with a corona discharge to increase the surface tension of the film. A hot melt adhesive may be applied to the treated film and a package is subsequently formed by combining the treated film and a similar, but untreated, Barex packaging film. *The corona discharge treatment increases the surface tension of the film, yet unexpectedly decreases the strength of the adhesive bond such that when the package is opened the adhesive is completely and uniformly pulled away from the treated surface visually without any undesirable "stringing" resulting.*

(*Id.* at col. 2, ll. 7-26 (emphasis added).)

FF12 According to Feldmeier, when a Barex film is treated by corona discharge, "it surprisingly and unexpectedly results in reduced bond strength between the treated Barex film and an adhesive applied thereto." (*Id.* at col. 4, ll. 16-30.)

FF13 Feldmeier teaches that the invention relates to "the establishment of peelable, adhesive-based hermetic seals between two sheets of packaging material which are not heat selable in nature, such as polyester, polyvinyl chloride polyamide and polyacrylonitrile films," and more specifically "polyacrylonitrile films, such as Barex." (*Id.* at col. 1, ll. 62-68.)

FF14 Corona discharge[2] is defined as:

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[2] corona discharge. Dictionary.com. *The American Heritage® Science Dictionary*. Houghton Mifflin Company. http://dictionary.reference.com/browse/corona discharge (accessed: August 27, 2009).

> An electrical discharge characterized by a corona, occurring when one of two conducting surfaces (such as electrodes) of differing voltages has a pointed shape, resulting in a highly concentrated electric field at its tip that ionizes the air (or other gas) around it. Corona discharge can result in power loss in the transmission of electric power, and is used in photocopying machines and air-purification devices.

FF15 The Examiner concludes that "[i]t would have been obvious to one of ordinary skill . . . to apply the teaching of radiation weakened adhesive bonding to the container of Matuszak" as "an obvious matter of design choice of known equivalent adhesive bonding methods." (Ans. 3.)

FF16 The Examiner concludes further it would have been obvious to use any material, such as polyurethane, "since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use." (*Id.* at 4.)

FF17 The Examiner also finds that "[c]orona treatment and microwave radiation are known equivalent techniques for curing substrates as evidenced by Kang." (*Id.* at 10.)

FF18 The Examiner rejects claims 9, 20, and 29 under 35 U.S.C. § 103(a) as being obvious over the combination of Matuszak and Feldmeier as further combined with Reese (Ans. 4).

FF19 The combination of Matuszak and Feldmeier is relied upon as above (*id.*).

FF20 Reese is relied upon for teaching that "hot melt adhesive and polyurethane adhesive are structurally equivalent for securing two structures together." (*Id.*).

FF21 The Examiner rejects claims 1-7, 10, and 40 (10) under 35 U.S.C. § 103(a) as being obvious over the combination of Nelson, Feldmeier, and Matuszak (Ans. 6).

FF22 The Examiner rejects claims 9 and 41 under 35 U.S.C. § 103(a) as being obvious over the combination of Nelson, Feldmeier, and Matuszak, as further combined with Reese (*id.* at 7).

FF23 The Examiner rejects claims 11-17, 19, and 20 under 35 U.S.C. § 103(a) as being obvious over the combination of Nelson, Feldmeier and Matuszak (Ans. 8).

ANALYSIS

Appellant notes that the Examiner "acknowledges that Matuszak does not disclose a radiation weakened bond formed of an adhesive," and relies on Feldmeier to remedy that deficiency (App. Br. 6). Feldmeier, Appellant asserts, "is directed to a peelable seal formed by surface treating a polyacrylonitrile film to reduce the strength of a bond between the treated film and an adhesive, not by treating the adhesive." (*Id.* at 7.) Appellant asserts that in Feldmeier, the corona discharge treatment is performed to formation of the bond, and thus "the bond itself is not radiation weakened." (*Id.* at 8.) Appellant argues that "the term 'radiation weakened bond' [as in claim 1] requires that a 'bond' is 'radiation weakened,' i.e. weakened by radiation, or has the same structure as such a radiation weakened bond." (*Id.* at 10.)

The Examiner responds that "the features upon which appellant relies (i.e., radiation weakened adhesive which is treated prior to application to a container assembly) are not recited in the rejected claim(s)." (Ans. 9.) The Examiner argues "that peelable bonds are well known in the container art," and the "corona charged bond of Feldheimer is a peelable bond as is known in the art." (*Id.* at 10.)

We conclude that the Examiner has the better position. Claim 1 requires (emphasis added) "a plastic membrane of sufficient size to cover the opening and having an outer peripheral area attached to the base portion by a radiation weakened bond, *the radiation weakened bond being formed of an adhesive and having a predetermined tensile force strength*." While we agree that Feldmeier teaches treatment of the film, rather than the adhesive, Feldmeier teaches that the "corona discharge treatment increases the surface tension of the film, yet unexpectedly decreases the strength of the adhesive bond." (FF11) Thus, the radiation increases the surface tension of the film, which results in weakening of the adhesive bond, resulting in a peelable bond as required by claim 1.

In addition, while Appellant argues that having an adhesive whose bond is directly reduced by radiation is different from the bond of Feldmeier, wherein it is the treatment of the film that results in weakening of the adhesive bond, in both cases the adhesive bond is weakened, and Appellant has provided no evidence that the structure of the bond differs. *See, e.g.*, *In re Scarbrough*, 500 F.2d 560, 566 (CCPA 1974) (noting that arguments of counsel cannot take the place of evidence in the record). We therefore conclude that the container taught by the combination of Matuszak and Feldmeier meets all the limitations of the container of claim 1.

Appellant reiterates the above arguments as to independent claim 11 (App. Br. 12) and independent claim 21 (*id.* at 13). Those arguments are thus not found to be convincing for the reasons set forth above with respect to independent claim 1.

As to claim 10, 20, and 30 Appellant argues that the references relied upon by the Examiner do not disclose the use of microwave radiation, or that the references disclose or suggest any bond that has been weakened by microwave radiation or is equivalent to a bond equivalent to a bond weakened by microwave radiation (App. Br. 11; *see also* Reply Br. 3).

Claims 10, 20, and 30 recite an "easy-opening, retortable container according to Claim 1 wherein the bond is weakened by microwave radiation." Feldmeier teaches that it is the use of corona discharge that "surprisingly and unexpectedly results in reduced bond strength between the treated Barex film and an adhesive applied thereto" (FF12), and the Examiner has provided no evidence that the use of microwave radiation would also result in a peelable bond. We are thus compelled to reverse the rejection as to claims 10, 20, and 30.

As to independent claim 41, Appellant argues that "neither of the cited references discloses any radiation weakened adhesive and, in particular, radiation weakened polyurethane." (App. Br. 13.)

While Feldmeier discloses the use of certain films (*see* FF13) for use in the formation of the peelable bond, the reference generically discloses the use of an adhesive. Thus, we agree with the Examiner (*see, e.g.*, FF16) that the use of any known adhesive, such as polyurethane, would have been obvious to the ordinary artisan. Moreover, as discussed above, Feldmeier teaches that corona discharge treatment of the film results in weakening of the adhesive bond, and thus Feldmeier teaches an adhesive with a radiation weakened bond.

As to the rejection of claims 9, 20, and 29 over the combination of Matuszak and Feldmeier as further combined with Reese, Appellant argues that Reese does not cure the deficiencies of Matuszak and Feldmeier (App. Br. 14). Those arguments are thus not found to be convincing as to claims 9 and 29 for the reasons set forth above with respect to the combination of Matuszak and Feldmeier. However, we reverse as to claim 20 for the reasons also set forth above with respect to the rejection of claims 10, 20, and 30 over the combination of Feldmeier and Matuszak.

As to the rejection of claims 1-7 over the combination of Nelson, Feldmeier and Matuszak, Appellant reiterates the arguments made as to the rejection of claim 1 over Matuszak and Feldmeier, and that Nelson does not cure the deficiency (App. Br. 19-20). Those arguments are thus also not found to be convincing for the reasons set forth above with respect to the combination of Matuszak and Feldmeier.

As to the rejection of claim 10 over the combination of Nelson, Feldmeier and Matuszak, Appellant argues that the references relied upon by the Examiner do not disclose the use of microwave radiation, or that the references disclose or suggest any bond that has been weakened by microwave radiation or is equivalent to a bond weakened by microwave radiation (App. Br. 20). We agree with Appellant for the reasons set forth with respect to the rejection of claims 10, 20, and 30 over the combination of Feldmeier and Matuszak, set forth above.

As to the rejection of claim 40 over the combination of Nelson, Feldmeier and Matuszak, Appellant essentially reiterates the arguments made as to the rejection of claim 1 over Nelson, Feldmeier and Matuszak (App. Br. 21). Those arguments are thus also not found to be convincing for the reasons set forth above with respect to the combination of Matuszak and Feldmeier.

As to the rejection of claim 9 and 41 over the combination of Nelson, Feldmeier and Matuszak, as further combined with Reese, Appellant argues that Reese does not cure the deficiencies of Nelson, Feldmeier and Matuszak (App. Br. 21). Those arguments are thus also not found to be convincing for the reasons set forth above with respect to the combination of Matuszak and Feldmeier.

Appellant argues further as to the rejection of claim 41 over the combination of Nelson, Feldmeier and Matuszak, as further combined with Reese, Appellant reiterates that Feldmeier "fails to disclose that a polyurethane (or any other adhesive) is subjected to the corona discharge treatment." (App. Br. 21-22.) Those arguments are not found to be convincing for the reasons set forth above with respect to the rejection of claim 41 over the combination of Matuszak and Feldmeier.

As to the rejection of claims 11-17, 19, and 20 over the combination of Nelson, Feldmeier and Matuszak, Appellant essentially reiterates the arguments made as to the rejection of claim 1 over Nelson, Feldmeier and Matuszak (App. Br. 22-23). Those arguments are thus also not found to be convincing for the reasons set forth above with respect to the combination of Matuszak and Feldmeier.

CONCLUSIONS OF LAW

We conclude that 1) Appellant has not established that the Examiner erred in finding that Feldmeier teaches an adhesive with a radiation weakened bond, but that and 2) Appellant has established that the Examiner failed to establish a prima facie case that even if Feldmeier discloses an adhesive with a radiation weakened bond, that the bond may be weakened by microwave radiation.

Thus, we affirm the rejection of claims 1-7, 9-17, 20-27, 30, 40, and 41 under 35 U.S.C. § 103(a) as being obvious over the combination of Matuszak and Feldmeier as to claims 1-7, 9, 11-17, 21-27, 40, and 41, but reverse as to claims 10, 20, and 30.

We also affirm the rejection of claims 1-7, 10, and 40 under 35 U.S.C. § 103(a) as being obvious over the combination of Nelson, Feldmeier and Matuszak as to claims 1-7 and 40, but reverse as to claim 10.

We affirm the rejection of claims 9, 20, and 29 under 35 U.S.C. § 103(a) as being obvious over the combination of Matuszak and Feldmeier as further combined with Reese as to claims 9 and 29, but reverse as to claim 20.

We affirm the rejection of claims 11-17, 19, and 20 under 35 U.S.C. § 103(a) as being obvious over the combination of Nelson, Feldmeier and Matuszak as to claims 11-17 and 19, but reverse as to claim 20.

Finally, we affirm the rejection of claims 9 and 41 under 35 U.S.C. § 103(a) as being obvious over the combination of Nelson, Feldmeier and Matuszak, as further combined with Reese.

ISSUE (Nelson)

The Examiner concludes that claims 21-27 are rendered obvious by the combination of Nelson and Matuszak, and that claim 29 is rendered obvious by the combination of Nelson and Matuszak as further combined with Reese.

Appellant contends that the combination as set forth by the Examiner does not teach that the adhesive bond is configured to be radiation weakened to have a predetermined tensile force strength as recited in Claim 21.

Thus, the issue on Appeal is: Has Appellant demonstrated that the Examiner erred in concluding that the combination of Nelson and Matuszak render obvious an adhesive bond is configured to be radiation weakened to have a predetermined tensile force strength as recited in Claim 21?

FINDINGS OF FACT

FF24 As to the bond that is configured to be radiation weakened to have a predetermined tensile force strength, the Specification teaches the use of a polyurethane or nylon adhesive (Spec. 6).

FF25 The Examiner rejects claims 21-27 under 35 U.S.C. § 103(a) as being obvious over the combination of Nelson and Matuszak (Ans. 5).

FF26 The Examiner finds:

> Nelson discloses a closure for hermetic sealing of an open end of a retortable container, the closure comprising an end ring and a membrane adhesively attached to the end ring and covering an opening therethrough, the adhesive *configured* to be radiation weakened to have a predetermined tensile force strength and the ring is *configured* to be fusion welded to the container and the bond *adapted* to be weakened by microwave radiation.

(*Id.*)

FF27 The Examiner notes that "the phrases 'configured to be' and 'adapted to be' do not positively set forth the structure set forth thereafter, but indicates the capability of the structure being possible." (*Id.*)

FF28 Nelson teaches the use of a heat-sealable material that can survive the retort environment, such as polypropylene (Nelson, col. 5, ll. 10-40).

FF29 The Examiner notes that "Nelson does not teach the ring and membrane are plastic." (Ans. 5.)

FF30 The Examiner cites Matuszak for teaching "it is known to utilize metal or plastic for the container and lid." (*Id.*)

FF31 Matuszak teaches the use of heat sealing bonding, wherein the polymers suitable for such use include polyethylene, polypropylene, polyethylene/polypropylene blend, random copolymer polypropylene and high density polyethylene (Matuszak, col. 4, ll. 56-62).

FF32 Matuszak teaches further that the easy-opening closure allows for reheating by microwave energy (*id.* at col. 7, ll. 22-25).

FF33 The Examiner rejects claim 29 under 35 U.S.C. § 103(a) as being obvious over the combination of Nelson and Matuszak, as further combined with Reese (Ans. 5).

ANALYSIS

Appellant argues that claim 21 requires that "the plastic end ring is attached to the plastic membrane by a bond formed of an adhesive, and the adhesive that is disposed between the two plastic members is configured to be radiation weakened to have the predetermined tensile force strength."

(App. Br. 14.) Appellant asserts that Nelson "does not teach that the adhesive bond is configured to be radiation weakened to have a predetermined tensile force strength as recited in Claim 21 (or that the plastic end ring is configured to be fusion welded to the container and the bond is adapted to be weakened by microwave radiation, as recited in Claims 22 and 30, respectively)." (*Id.* at 15.) Nelson, Appellant argues, "discloses a closure with a metal end ring and a heat-sealable material used for a heat-seal bond." (*Id.*)

Appellant asserts further that Matuszak does not remedy the above deficiency (*id.*). Appellant argues that "Matuszak teaches away from an adhesive bond that is configured to be radiation weakened, and instead discloses a bond that is maintained even when subjected to microwave energy." (*Id.* at 15-16.)

Claim 21 (emphasis added) requires "a plastic membrane of sufficient size to cover the opening and having an outer peripheral area overlapping and attached to the intermediate area of the end ring by a bond, *the bond* being formed of an adhesive disposed between the plastic ring and the plastic membrane and having a predetermined shear force strength and *configured to be radiation weakened* to have a predetermined tensile force strength." We interpret a "bond . . . configured to be radiation weakened" as requiring a bond, such as an adhesive, which is weakened upon application of radiation, such as microwave radiation.

Nelson teaches the use of a heat sealable bond, such as the use of a polypropylene adhesive. The Examiner has provided no evidence or reasoning that the bond of a polypropylene adhesive is "configured" to be weakened upon application of radiation. Stated differently, there is no evidence of record demonstrating that the ordinary artisan would understand that a bond made using a polypropylene adhesive would experience weakening when radiation, such as microwave radiation is applied. That conclusion is supported by Matuszak, who also teaches the use of a heat sealing bonding, wherein a polymer suitable for such use includes polypropylene. Matuszak teaches further that their containers that incorporate such a bond allow for reheating by microwave energy, suggesting that the bond is not weakened by the application of such radiation. We thus conclude that the Examiner has not established a prima facie case that independent claim 21 is rendered obvious by the combination of Nelson and Matuszak, and we are compelled to reverse the rejection.

As to the rejection of claim 29 over the combination of Nelson and Matuszak, as further combined with Reese, as the Examiner does not rely on Reese to remedy the deficiencies of the combination of Nelson and Matuszak, we are compelled to reverse this rejection as well.

CONCLUSION OF LAW

We conclude that Appellant has demonstrated that the Examiner erred in concluding that the combination of Nelson and Matuszak renders obvious an adhesive bond that is configured to be radiation weakened to have a predetermined tensile force strength as recited in Claim 21.

We are thus compelled to reverse the rejections of:

Claims 21-27 under 35 U.S.C. § 103(a) as being obvious over the combination of Nelson and Matuszak; and

Claim 29 under 35 U.S.C. § 103(a) as being obvious over the combination of Nelson and Matuszak, as further combined with Reese.

TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED-IN-PART

cdc

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